

**THE POTENTIAL EFFECTS OF POLICY-DRIVEN AIR POLLUTION
INTERVENTIONS ON CHILDHOOD LUNG DEVELOPMENT**

Robert Urman, PhD; Erika Garcia, PhD; Kiros Berhane, PhD; Rob McConnell, MD; W.
James Gauderman, PhD, Frank Gilliland, MD, PhD

Online Data Supplement

Table E1: Averaged NO₂ concentrations (in ppb) that were observed and used in hypothetical intervention scenarios by community and cohort

Community	Cohort	Observed concentrations	Scenario 1	Scenario 2			Scenario 3	
			Remained at 1993 levels	10% reduction	20% reduction	30% reduction	Threshold at 30 ppb	Threshold at 20 ppb
Long Beach	1993	34.4	34.4	31.0	27.5	24.1	30.0	20.0
	1996	32.9	34.4	29.6	26.3	23.0	30.0	20.0
	2002	20.3	34.4	18.3	16.2	14.2	20.3	20.0
Mira Loma	1993	23.3	23.3	21.0	18.6	16.3	23.3	20.0
	1996	25.3	23.3	22.8	20.2	17.7	25.3	20.0
	2002	16.7	23.3	15.0	13.4	11.7	16.7	16.7
Riverside	1993	24.7	24.7	22.2	19.8	17.3	24.7	20.0
	1996	25.7	24.7	23.1	20.5	18.0	25.7	20.0
	2002	21.4	24.7	19.3	17.1	15.0	21.4	20.0
San Dimas	1993	36.6	36.6	32.9	29.3	25.6	30.0	20.0
	1996	32.4	36.6	29.1	25.9	22.6	30.0	20.0
	2002	21.5	36.6	19.3	17.2	15.0	21.5	20.0
Upland	1993	39.4	39.4	35.4	31.5	27.6	30.0	20.0
	1996	36.2	39.4	32.6	28.9	25.3	30.0	20.0
	2002	23.4	39.4	21.0	18.7	16.4	23.4	20.0

Table E2: Averaged PM_{2.5} concentrations (in µg/m³) that were observed and used in hypothetical intervention scenarios by community and cohort

Community	Cohort	Observed concentrations	Scenario 1	Scenario 2			Scenario 3	
			Remained at 1993 levels	10% reduction	20% reduction	30% reduction	Threshold at 30 µg/m ³	Threshold at 20 µg/m ³
Long Beach	1993	21.3	21.3	19.1	17.0	14.9	15.0	12.0
	1996	19.7	21.3	17.7	15.7	13.8	15.0	12.0
	2002	13.0	21.3	11.7	10.4	9.1	13.0	12.0
Mira Loma	1993	31.5	31.5	28.3	25.2	22.0	15.0	12.0
	1996	27.6	31.5	24.9	22.1	19.3	15.0	12.0
	2002	17.8	31.5	16.1	14.3	12.5	15.0	12.0
Riverside	1993	29.3	29.3	26.4	23.4	20.5	15.0	12.0
	1996	25.7	29.3	23.1	20.6	18.0	15.0	12.0
	2002	13.1	29.3	11.8	10.5	9.2	13.1	12.0
San Dimas	1993	24.5	24.5	22.0	19.6	17.1	15.0	12.0
	1996	19.6	24.5	17.7	15.7	13.7	15.0	12.0
	2002	11.9	24.5	10.7	9.5	8.3	11.9	11.9
Upland	1993	28.7	28.7	25.9	23.0	20.1	15.0	12.0
	1996	23.8	28.7	21.4	19.0	16.7	15.0	12.0
	2002	16.1	28.7	14.5	12.9	11.3	15.0	12.0

Table E3: Number of communities exceeding United States Environmental Protection Agency standard, World Health Organization standard, and hypothetical thresholds used in the g-computation analyses

Standards/thresholds	Number of community-cohorts exceeding standards/thresholds
<u>NO₂</u>	
53ppb *	0/15 (0%)
30ppb ‡	6/15 (40%)
21ppb †	13/15 (87%)
20ppb ‡	14/15 (93%)
<u>PM_{2.5}</u>	
15µg/m ³ ‡	12/15 (80%)
12 µg/m ³ *‡	14/15 (93%)
10 µg/m ³ †	15/15 (100%)

* United States Environmental Protection Agency standard.

† World Health Organization standard.

‡ Thresholds used in the g-computation analysis.